

comparative of CL and VL gels. About 80 protein spots send for identifying the type of protein amino acids with mass spectrometry that its results will be presented later in Congress.

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#### COMPARISON THE IMMUNE RESPONSE IN HEALING AND NONHEALING CUTANEOUS LEISHMANIASIS WITH GLUCANTIME IN MASHHAD.

Mohajery M.\*, Shamsian SA., Shahi M., Fathimoghdam F.  
\*Medical Parasitologist, Mashhad University of Medical Sciences.

Cutaneous leishmaniasis is one of the endemic diseases in khorasan, especially in Mashhad. Variety of immune response in different people make diverse of clinical signs. In consider to critical role of immune response to create different form of cutaneous leishmaniasis, we decided to do this study to found improved method for treating nonhealing patients.

Different classes of T. cells were calculated by Flow Cytometry System (FCS) in study groups consisted healing, nonhealing and control groups. Subsequently T. cells stimulated with Leishmania Antigen and Mitogen (phytohemagglutinin) invitro. After that secreted IL-4, IL-12, IFN- $\gamma$  and IL-10 were evaluated by enzyme-linked immunosorbent assay (ELISA) in study groups. The number of Th1 lymphocyte besides the level of secretion IL-12 and IFN- $\gamma$  in healing group was higher than nonhealing group ( $p < 0.05$ ). Also the number of Th2 lymphocyte and the levels of IL-4 plus IL-10 secreted in nonhealing group were higher than healing group ( $p < 0.05$ ). The other finding was increasing the number of T. cytotoxic1 (Tc1) in healing group comparing with nonhealing group.

Consequences of present study demonstrate that the number of Th1 lymphocyte and the level of IL-12 and IFN- $\gamma$  that activate Th1 response, in healing patients were higher than nonhealing cases. Moreover the number of Tc1 cells that greater than healing cases play a critical role in cure patients and rising cellular immunity.

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#### IL-23 AND IL-27 LEVELS IN MACROPHAGES COLLECTED FROM PERIPHERAL BLOOD OFPATIENTS WITH HEALING VS NON-HEALING FORM OF CUTANEOUS LEISHMANIASIS

Tolouei S\*, Hejazi SH., Ghaedi K., KhamesipourA., Hasheminia SJ

\*Department of Parasitology and Mycology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

Cutaneous leishmaniasis (CL) is a self-healing disease; however rarely for unknown reasons the lesion develops to a non-healing form of disease. The initial encounter of

*Leishmania* with its host's innate immune system is important in the outcome of infection. Although tremendous data is available in murine model of leishmaniasis but immunological surrogate marker(s) of healing and protection in human is yet not well defined. In this study the level of IL-23 and IL-27 produced by peripheral blood derived macrophages from patients with healing or non-healing form of cutaneous leishmaniasis lesion were determined to explore whether IL-23 or IL-27 plays any role in healing process of cutaneous lesions induced by *L. major*. Twenty patients resident in Isfahan Province, with healing or non-healing form of cutaneous leishmaniasis lesion caused by *Leishmania major* participated in this study. *In vitro* productions of IL-23 and IL-27 by peripheral blood derived macrophages, before and after stimulation with live *L. major* (MRHO/IR/75/ER) promastigotes were evaluated using ELISA method. The mean production of IL-23 and IL-27 from macrophages of patients with healing form of lesion was significantly higher than patients with non-healing form of lesion. The levels of IL-23 and IL-27 in culture supernatants before and after stimulation in healing form of CL was significantly higher than non-healing form of CL ( $P < 0.001$ ). IL-23 and IL-27 might play a role in human leishmaniasis and further studies are needed to understand the role of IL-23 and IL-27 in leishmaniasis.

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#### LEISHMANIA INFANTUM FOCUSE-MANNOSE LIGAND-SAPONIN INDUCE THE PRODUCTION OF IFN $\gamma$ IN VACCINATED DOGS

Mohammadi-Ghalehbin B\*, Hatam GH., Sarkari B., Mohebbali M., Zarei Z

\*Dept. of Microbiology and Parasitology, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran

Mediterranean basin and some parts of Iran. Dogs are the major reservoirs of *Leishmania infantum* and are responsible for human visceral leishmaniasis. Cellular immunity has the main role in resistance to this fatal infection.

Fucose Mannose ligand (FML) antigen was isolated from native *L. infantum* and dogs were vaccinated with FML-saponin for three times. Peripheral blood mononuclear cells were separated from the blood samples of vaccinated and control dogs. Mononuclear cells of both groups were cultivated and were treated with FML and concanavalin A separately. IFN $\gamma$  gene expression was evaluated by real time PCR in the invitro cultivated cells.

Our findings demonstrated a significant increase in the expression of IFN $\gamma$  gene transcripts in PBMCs of FML-saponin injected dogs in comparison with control groups. FML-saponin strongly stimulates Th1 immune response in FML-saponin injected dogs.